



File Code: 3420
Route To: (2400), (2600)

Date: November 27, 2006

Subject: Proposed 2007 Pinaleno Ecosystem Management Restoration Project - Blocks K and L

To: District Ranger, Safford Ranger District

On October 16, 2006, I met with Craig Wilcox, Silviculturist, and Lisa Angle, Forester, to evaluate the proposed FY 2007 Pinaleno Ecosystem Management Restoration Project. Craig submitted the proposal to cover costs associated with precommercial thinning and slash treatment on 77 acres. This letter serves as an evaluation for this project.

Blocks K and L are the final treatment units of the Districts 1,100 acre Pinaleno Ecosystem Management Analysis Area. During analysis, sites were selected along Highway 366 (Swift Trail) due to their proximity to critical habitat for the Mt. Graham Red Squirrel (MGRS) and Mexican Spotted Owl (MSO). Habitat losses for these two species have occurred over the past 10 years due to bark beetles, spruce aphid, spruce-fir looper, wildfire and severe drought.

Overstory vegetation is dominated by large, mature Douglas fir, ponderosa pine, southwestern white pine, and aspen. Large Engelmann spruce are also scattered throughout the area. The understory is densely stocked with Engelmann spruce and corkbark fir. Tree densities are in excess of 200 square feet of basal area per acre (BA) (Figure 1).

Due to recent spruce beetle and Douglas fir beetle activity over the past several years, groups of Douglas fir and Engelmann spruce snags are common throughout the two treatment blocks (Figure 2). Dwarf mistletoe, *Arceuthobium microcarpum*, and the root rot pathogen, *Inonotus tomentosus*, are both infecting Engelmann spruce. Severe dwarf mistletoe infection weakens trees, making them susceptible to bark beetle attack and we saw evidence of dwarf mistletoe witches' brooms in many beetle-killed snags.



Figure 1 Dense stand of Douglas fir, ponderosa pine, southwestern white pine and Engelmann spruce.



The project was established to reduce hazardous fuel loadings and improve tree vigor. The intent is to retain canopy cover, large snags and large logs, while reducing ladder fuels and ground fuels that contribute to catastrophic fire conditions. The prescription calls for thinning trees <9" dbh down to 110 trees per acre, as well as reducing dead fuels. The latter will be covered with matching Hazardous Fuels funding. Dwarf mistletoe infected trees will be selected over uninfected trees. Slash will be piled and burned, with piles located more than 50 feet from any existing MGRS midden.



Figure 2 Mortality caused by Douglas fir and spruce beetle occur in both treatment blocks.

In addition to agreeing with the proposed prescriptions, our office recommends that slash be generated between late summer and the end of December, if possible. Slash piles should be placed in stand openings as much as possible and the largest diameter slash put on the outside of the pile to promote quick drying. Teepee style slash piles with branches and small-diameter slash in the middle and the larger diameter material on the outside.

If you have any questions regarding this evaluation, please let us know. I can be reached at (928) 556-2075 (mfairweather@fs.fed.us, Mary Lou).

/s/ Mary Lou Fairweather
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